

Sealing Structure Capable of Withstanding Water Pressure

BACKGROUND OF THE INVENTION

(a) Field of the invention

The present invention relates to a sealing structure capable of
5 withstanding water pressure, having a zipper at an opening of a closable
container, a pillar-shaped inside fastener unit and a C-shaped outside fastener
unit extending vertically from two margins of the opening, to resist water from
seeping after the inside fastener unit and the outside fastener unit are firmly
combined.

10 (b) Description of the Prior Art

At an opening of a conventional container 1 having a zipper closing
(shown in FIGS. 1 and 2), there is a zipper 2 fitted inside two sides of the
opening, with a cover unit 11 extended from one side of the opening, when the
zipper 2 is closed, the opening can be rapidly closed, and a flap 11 on one side
15 of the opening will cover the sealing of the zipper 2, the objective is to
obstruct water spraying from outside, and prevent water from seeping from the
outside of the zipper 2. But that structure serves only the purpose of
obstruction. In case water level is higher than the opening, water will flow
through the flap 11 into the sealing of the zipper 2, further seeping through the
20 zipper 2, or maybe some zipper 2 has resistance to water, but if water
immersing the opening has a larger pressure, there is simply no prevention
from water seepage. Therefore, such sealing structure is not capable of
preventing water seepage, especially when water has some pressure.

SUMMARY OF THE INVENTION

Therefore, to improve on the above shortcomings of inability to prevent water from seeping as in the prior art of opening sealing structure, the present invention has included a zipper inside the opening, and has vertical extensions
5 of a pillar-shaped inside fastener unit and a C-shaped outside fastener unit on two margins of the opening, and after the zipper has rapidly closed the opening, the inside fastener unit is wrapped by the outside fastener unit, so the inside and outside fastener units are closely combined together, so even when outside water has immersed the opening or the water has a larger pressure, the
10 outside fastener unit is subjected to water pressure, and the outside fastener unit envelops and combines firmly on the inside fastener unit, to completely obstruct water seepage and achieve the purpose of prevention against water seepage.

Moreover, the vertical extension on the inside and outside fastener units is
15 a buffer plate structure, providing buffer performance in case the sealing is subjected to outside forces.

Secondly, to enhance water-resistant effects, there is optionally a C-shaped exterior wrapping strip, wrapping onto the outside fastener unit, so the sealing is protected by double sealing mechanisms.

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BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schematic view of an outside of the prior art of zipper-type sealing structure.

FIG. 2 is a schematic view of an inside of the prior art of zipper-type sealing

structure.

FIG. 3 is a schematic view of the sealing structure in the present invention.

FIG. 4 is a section view of the sealing structure in the present invention.

5 **DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS**

As shown in FIGS. 3 and 4, there is a zipper 4 fitted to an inside of two sides of a flexible member 3 installed at an opening of a container. The zipper 4 serves to enable rapid closing of the opening. The flexible member 3 extends from two sides of the flexible member 3, like butterfly wings, serving to fasten
10 the zipper 4 and combine with a container or a bag to become a water-resistant container or bag. Due to the strength of the zipper 4, the sealing has better tensile strength when the opening is closed and sealed. One margin of the opening has a vertical extension of a pillar-shaped inside fastener unit 31. The vertical extension is a buffer plate 33. Another margin of the opening also
15 extends vertically to become a C-shaped flexible outside fastener unit 32, its vertical extension also a buffer plate 33 structure, so that the inside fastener unit 31 is capable of accommodating the outside fastener unit 32, and the outside fastener unit 32 is capable of wrapping the inside fastener unit 31. Moreover, there is a C-shaped flexible exterior wrapping strip 5 to wrap the
20 outside fastener unit 32, while the buffer plate 33 provides a smooth wrapping space for the exterior wrapping strip 5.

When the zipper 4 has sealed the opening, with an opening of the outside fastener unit 32 slightly turned outward, the inside fastener unit 31 is wrapped inside the outside fastener unit 32; in other words, the outside fastener unit 32

tightly wraps the inside fastener unit 31. Likewise, the opening of the exterior wrapping strip 5 is slightly turned out, so the outside fastener unit 32 is easily accommodated inside the exterior wrapping strip 5. By interlocking the wrapping effects of the inside fastener unit 31, the outside fastener unit 32 and the exterior wrapping strip 5 on the sealing of the opening, water could not seep in. Even when water level is higher than the sealing, water pressure is applied directly on the exterior wrapping strip 5, tightening the inside fastener unit 31, the outside fastener unit 32 and the exterior wrapping strip 5, thereby enhancing its water-resistant efficiency. When the sealing is subjected to an outside force, the buffer plate 33 provides a buffer for the pulling force.